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NOTES ON GEOGRAPHIC DISTRIBUTION

Rulyrana erminea (Torres-Gastello, Suárez-Segovia and Cisneros-Heredia, 2007) (Anura: Centrolenidae): Distribution and range extension, Peru

Daniel Alcides Rodríguez Mercado

Universidad Nacional Mayor de San Marcos, Museo de Historia Natural, Departamento de Herpetología. Av. Arenales 1256, Jesús María. Ap. 14-0434. Lima, Peru.
E-mail: *daal911@yahoo.com*

ABSTRACT: *Rulyrana erminea* is an endemic glass frog from Peru associated to rainforests, bamboo forests, streams and converted areas. Previously, the species was known from a single female specimen. Herein, I report four additional specimens from three new localities, among them the first male specimens and the first record for the Department of Cusco, the new southernmost record for the species, extending its distribution 111.5 km airline to the south. The species is recorded between 370 – 870 m a.s.l. One specimen was found inside the Machiguenga Communal Reserve.

Rulyrana erminea (Torres-Gastelo, Suárez-Segovia and Cisneros-Heredia, 2007) was described based on a female specimen (Natural History Museum of the Universidad Nacional Mayor de San Marcos - MUSM 24056, SVL 23.6 mm), collected in Sabetari stream (11°14'31" S, 73°31'33" W; 370 m a.s.l.), Tambo River Basin, province of Satipo, Department of Junín, by Claudia Torres-Gastello on October 31, 2005. The species was categorized as Data Deficient (DD) in the IUCN Red List because the knowledge about its occurrence extent, area of occupancy and ecological requirements is scarce (Cisneros-Heredia 2008).

Two additional specimens were deposited in the Department of Herpetology of the Natural History Museum of the Universidad Nacional Mayor de San Marcos (MUSM), Lima, Peru; and two specimens were deposited in the Museum of Natural History of the Universidad Nacional San Antonio Abad del Cusco (MHNC), Cusco, Peru. The male (MUSM 26190, SVL 22.8 mm) was collected in the Parijaro waterfall, Ene River (11°56'22.122" S, 73°45'56.065" W; 870 m a.s.l.), district of Río Tambo, 150 km SE province of Satipo, department of Junín by Michael FitzPatrick on September 08, 2004 and identified by Margarita Medina-Müller. The female (MUSM 28216, SVL 24.8 mm; Figure 1) was collected in the Parotori river (12°08'42.405" S, 73°04'07.715" W; 590 m a.s.l.), in the Machiguenga Communal Reserve, province of Convención, department of Cusco by Daniel Rodríguez on September 04, 2009. This specimen was collected during a fieldwork authorized under the Environmental Impact Study of *Gasoducto Andino del Sur* (Directorial Resolution N°0399-2010-AG-DGFFS-DGEFFS) and represents the southernmost record for the species and the first record for the department of Cusco (Figure 2). The males (MHNC 7247, MHNC 10128) were collected in the Arco Iris waterfall (11°19'35.05" S, 74°30'46.1" W; 640 m a.s.l.), district of Tsiriari, province of Satipo, department of Junín by Margarita Medina-Müller on February 28, 2008. Those specimens represent the westernmost record for the species (Figure 2). Description of sexual dimorphism will be published elsewhere (Margarita Medina-Müller pers. com, 2010).

I used the ecological system of the Amazon Basin of Peru and Bolivia, by Josse *et al.* (2007) to identify habitat types where the specimens were collected. Thus, MUSM 24056 was collected in Southwestern Amazon Bamboo forest. The area has suffered little human impact and is covered by primary lowland forest consisting of dense forest (canopy height above 15 m) and semi-dense forest with patches of bamboo (*Guadua sarcocarpa*) (Torres-Gastello *et al*. 2007). The specimen was found on a leaf, 30 cm above ground, from a fallen tree next to a stream, at night. The specimens MUSM 26190 and MUSM 28216 were collected in Southwestern Amazon SubAndean evergreen forest. The first was found in primary forest located in the upper part of the Parijaroni waterfall, on a leaf on a tree, 1.8 m above ground, during the day (Margarita Medina-Müller pers. com, 2010). The second was found in an area that has not suffered human impact and is covered by primary forest and bamboo, on a shrub 1 m above ground adjacent to shallow streams, during the day.

MHNC 7247 and MHNC 10128 were collected in Converted Areas. The specimens were found in a primary forest located in the lower part of the Arco Iris waterfall, vocalizing on a tree 1.8 m above ground, at night (Margarita Medina-Müller pers. com, 2010).

These new localities expand the known geographical and altitudinal distribution of *Rulyrana erminea* in Peru, extending its distribution 111.5 km airline to the south and 108 km to the west. With these new records, the elevational range extends from 370 to 870 m a.s.l. (Figure 2). These dynamics in the sizes of their geographical ranges may be determined by the environmental tolerances (abiotics and biotic conditions) and capacities of species to respond to these changes (dispersal and colonization abilities) (Gaston and He 2002).

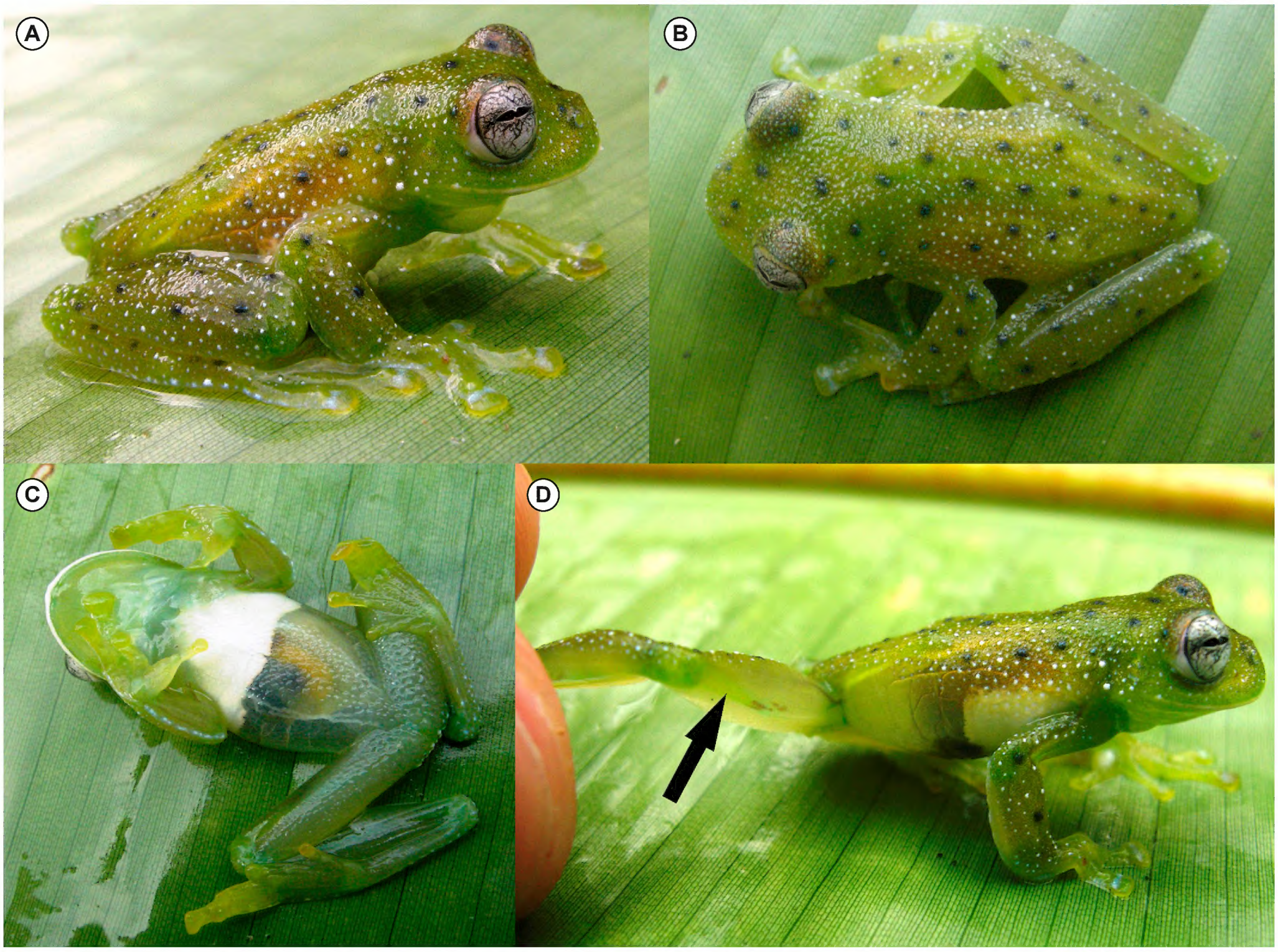

Figure 1. Female *Rulyrana erminea* (MUSM 28216; SVL 24.8 mm) in dorsolateral (A), dorsal (B), ventral (C), and bone green (D) views. Photo by D. Rodríguez.

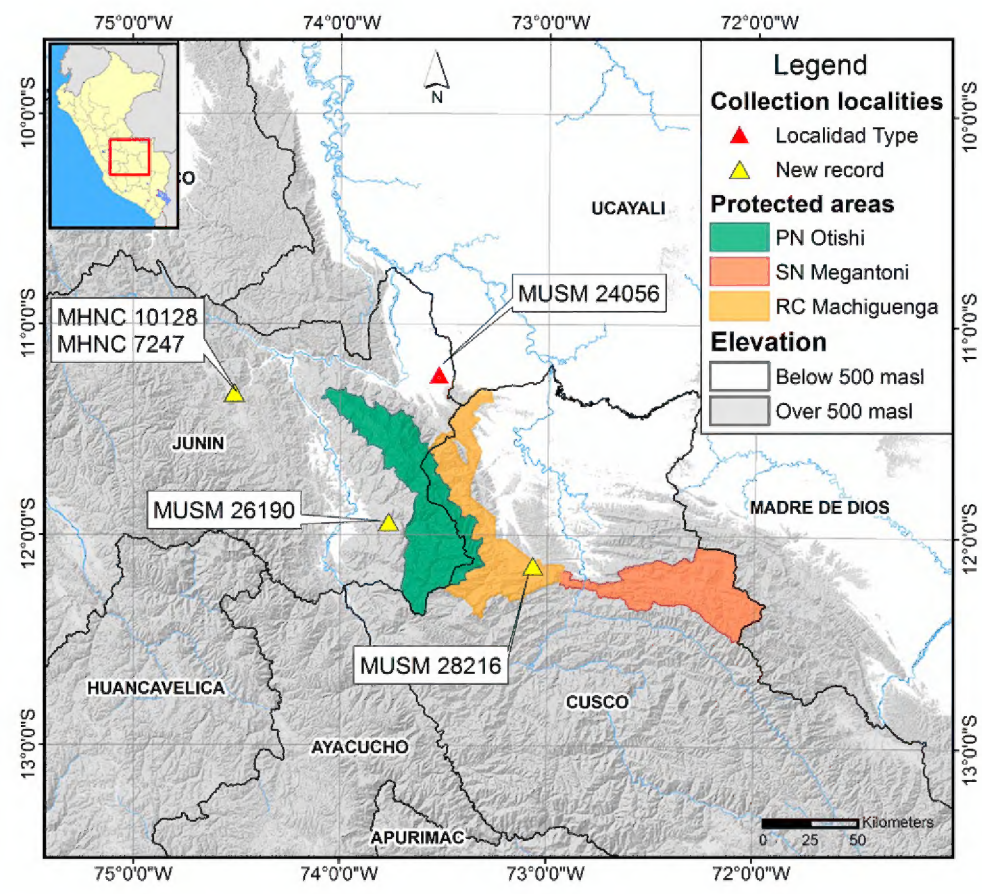

Figure 2. Geographical distribution of *Rulyrana erminea* in central and southern Peru based on the five known specimens. Red triangle = type locality; yellow triangles = new records.

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